ATTACHED OFFICES TO BUILDINGS COMMENCED BEFORE LAST JANUARY.

One of the latest awards made by the official referees is still further confirmatory of the view we have taken of attached offices and projections, not yet formed, to buildings commenced before January last. After what has appeared in our pages, it ought not to be necessary to publish this award, but as it affects a large number of persons, and some of the surveyors are not convinced without difficulty, it may not be useless to insert it.

Mr. James Bonnin had commenced, and in some instances covered, in before January last, a number of houses in Thurloe-square, in the district of South Kensington. He was in course of completing them by the construction of certain offices attached, and party fence walls, when the district surveyor claimed the superintendence of these offices and walls, on the ground that the footings had been laid since the 1st of January, that they were outside the houses, formed a distinct addition, and were therefore subject to the regulations of the Act.

The builder appealed to the official referees and urged that the offices and walls were a component part of the houses as commenced, and had been delayed merely for the convenience of scaffolding for the higher parts.

The referees awarded (May 24th), that inasmuch as the buildings in question formed, together with the main buildings to which they are or are to be attached, one general design, as shewn by the plan, and that such main buildings were commenced before the 1st day of January, 1845, the said buildings in question, that is to say the aforesaid attached offices and party fence walls to the three unfinished houses in Thurloe-square, are not subject to the operation of the said Act, as to the original building thereof.

And with regard to the costs, they further awarded, that, "inasmuch as the case was one of reasonable doubt," the same (4*l.* 2*s.* 6*d.*) should be paid by the builder and surveyor jointly.

ENGLISH ARCHITECTS AT HAMBURG.

The committee for rebuilding the church of St. Nicholas at Hamburg (destroyed by the great fire) having some months back offered premiums for the best designs for that building, which they wish to make one of the finest modern churches in Europe, have lately, out of forty-four designs submitted to their consideration, selected that of Mr. George Gilbert Scott and William Bonython Moffatt, of London, as deserving of the first, and those of Professor Strack, of Berlin, and Mr. Ludwig Lange, of Munich, as those meriting the second and third premiums. In coming to this decision, they were aided by the advice of Mr. Boisserte, of Munich, and of Mr. Zwirns, the architect to Cologne Cathedral. A design by Mr. Atkinson, late of Manchester, is said to have been much liked.

The selected design is in the style of the fourteenth century (the decorated); and may be regarded as one of the most successful efforts of modern architects. The tower is in the centre of the west end, and is surmounted by a lantern and lofty spire of open-work paneling, the whole very elaborately adorned. A peculiar effect is given to the upper part of the tower by a parapet around the base of the spire which projects considerably before the face of the building. The aisles outside present a series of gables, with buttresses and crocketed pinnacles at the points of junction. The commencement of the chancel is shewn by a stone lantern, rising from the ridge of the roof, and a small turret with pinnacle against the clerestory wall on each side. We hope the architects may see their very beautiful design satisfactorily carried out.

Absurdity. — A country correspondent tells us that a gentleman in the neighbourhood of Dudley has recently offered to give the sum of 5,000*l.* for the purpose of erecting a new church, provided that penny postage stamps to the amount of 2,000*l.*, which have been obliterated by passing through the post-office, are sent to him within a limited period. We said "how great!" on commencing the paragraph, but ended it with "how small!"

INSTITUTION OF CIVIL ENGINEERS.

At a meeting held on the 20th inst., the president in the chair, Mr. P. Barlow presented, as an appendix to his paper on the atmospheric system, the result of a series of experiments upon the force employed in drawing carriages up an incline plane of 1 in 43, by a stationary engine and rope traction, upon the Canterbury and Whitstable Railway. From these experiments it appeared, that the stationary engine of 25-horse power, with a rope, would produce a useful mechanical effect equal to the engine of 100-horse power on the Dalkey Atmospheric Railway; thus proving, by direct facts, the deduction of Mr. Stephenson as to the amount of lost power by the latter system. These statements were ordered to be printed with Mr. Barlow's paper.

A paper by Mr. Thorold, M. Inst. C. E., gave an account of the late failure of the Suspension Bridge at Yarmouth. After giving the dimensions of the structure, which appear to have been altered from the original design without the consent or superintendence of the architect, the immediate cause of the failure of the bridge was attributed to the fracture of one of the main links near the point of attachment to the pyramid: on examination it appeared that the iron was originally of indifferent quality, and that the weld had been made so imperfectly that only one-twentieth part of the sectional area of the bar had been welded: it was therefore evident that these links could never have been properly tested. An interesting discussion ensued, in which the principles of the construction of suspension bridges were laid down; and it was insisted upon, from the experience of the Menai, and Montrose, and other large bridges, that the platform of such bridges should be rendered perfectly rigid, so as to prevent any undulation, and that the chains should be merely used to support the actual weight of the platform and the road. The novel and ingenious plan for the bridge over the Menai straits, proposed by Mr. Stephenson, (*) to be constructed of a large wrought-iron tube, supported by chains, was also mentioned, and the principle appeared to be considered sound.

The next paper was by Mr. Grantham: it gave an interesting account of the wreck of the "Vanguard," iron steam vessel, which went on shore on a ledge of rocks, at the entrance of the Cove of Cork, and after remaining there until the rocks were cut away at low water, so that a high-water tide carried her off, was found to be so little injured that a few days sufficed to repair all damages. The engines were scarcely strained, and nothing was broken. This led to mention of some very remarkable instances of the power of resistance of iron vessels, and to the experiments now in progress of trial at Woolwich, on the powers of iron vessels to resist shot. It appeared that with a light charge of powder a hole was merely punched through the plate by the ball, but that with a heavy charge the ball striking the plate with great velocity rendered it brittle, and the fragments fled about in an extraordinary manner.

On the 27th instant, the paper read was by the president, giving "An account of the ancient Harbour of Ostia." From the concurrent testimonies of the classical writers, Ostia was originally founded anno 634 a.c. by Ancus Martius: it was situated at the mouth of the Tiber, about fourteen miles below Rome, and as the supplies for the capital arrived by the river, it was of importance to improve the navigation, and, at the same time, to provide for the shelter of the fleet which usually lay in the roadstead. Accordingly the Emperor Claudius determined to construct a new harbour entirely independent of the river, but at the same time having a connection with it. The general plan of this work, as described by Suetonius, and as given in Cannia's great work on the architecture of the ancients, is shewn to have consisted of an extensive outer harbour, formed by two artificial moles, each projecting about 1,900 feet into the sea, enclosing a space of about 130 acres. Between the extremities of the moles was situated another detached mole, which formed a breakwater, supported a light-house, and gave two entrances to the harbour, across which chains could be drawn, to form a closed port in time of war. A small inner harbour was also constructed, in which vessels could always remain afloat. This covered about 7 acres, and communicated with the Tiber by means of two parallel canals, furnished with stop gates, in order that the water of the river might be turned through the harbour, for scouring away the mud, or for other purposes. There is no evidence to shew that the pound lock was known or used. The walls of the moles were constructed upon arches, so as to give free access to the current, but at the same time they were sufficiently solid to break the sea, and so produce tranquillity within. This was very necessary, for, from the geological condition and the geographical position of Ostia, the coast was subject to constant advance from the alluvial deposit brought down by the Tiber: by this means a delta has constantly been in progress of formation, and in the course of 2,440 years the line of shore has advanced about 3 miles 600 yards. All the attempts to improve the entrance of the Tiber were, by this deposit, rendered completely abortive, as the projecting walls only increased the deposit. Eventually the ports of Claudius and of Trajan suffered the same fate, and although the works at Ostia were considered by the Romans as their greatest labour, they were of necessity abandoned, and the harbour of Centum Cellæ, or Civita Vecchia, was constructed as a substitute.

In the work of Ostia there was visibly much novelty and ingenuity in design and in construction; indeed, it must be observed, that almost every principle adopted by the improved skill and science of modern times, appears to have been there carried into effect with singular perseverance and ability. By a careful study of the original plans of these ancient works and the results, engineers might read very useful lessons for the treatment of many of the harbours of England, particularly those on the south eastern coast, where, as at Dover, great difficulties are to be contended with from the motion of shingle and silt. The position of English harbours differs in some degree from that of Ostia, on account of the former being subject to the action of a great rise of tide and strong littoral currents; while the latter was situated in the Mediterranean, where there is scarcely any tide, and of which the shore currents are sluggish. The deposits of silt would be in the latter case very rapid, as the water of the Tiber entering nearly at right angles with the shore, would arrest the current, and the whole speedily would become comparatively stagnant.

In the discussion which ensued upon this paper, the cases of Dover, Rye, Ramsgate, and many other harbours were explained, and the probable result of the present works commented upon.

INSUFFICIENT SCAFFOLDING.

The daily papers speak of a fearful accident which happened last week at a house opposite Bow Church, where five men were employed upon a scaffold in front of the building. Whilst thus engaged, one of the putlogs, intended to sustain the planks upon which the workmen stood, gave way from the wall, and the cross piece, being thus left unsupported, broke down, and precipitated all five men, four of whom fell with great violence to the ground, while one clung to a scaffold pole. One of the poor fellows had his leg dreadfully smashed, so that it is feared amputation will be necessary. The other workmen, happily, have not sustained any very serious injury.

Hardly a week passes without the occurrence of an accident through want of care in the preparation of scaffolding, or the use of improper materials: it is really incumbent on masters to see that their workmen are provided with sound and proper boards and poles for the purpose, and are enjoined to avoid unnecessary danger. All who are in the habit of ascending many scaffolds must occasionally shudder at the imminent peril to which workmen are sometimes exposed in this respect.

Improvements at Gainsbro'.—It is proposed to benefit the town of Gainsbro' by converting certain premises situate in the market-place, and recently in the occupation of Mr. F. Otter, into public rooms, corn market, covered butter market, &c., for which they are said to be in every respect peculiarly eligible.

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